

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A magnetoresistive head, comprising:

a magnetoresistive film including first and second magnetization free layers, an intermediate layer sandwiched between the first and second magnetization free layers, an underlayer and a protective layer, which are stacked in the order of the underlayer, the first magnetization free layer, the intermediate layer, the second magnetization free layer and the protective layer and arranged to be substantially perpendicular to an air-bearing surface, each magnetization direction of which first and second magnetization free layers is allowed to vary independently in response to a signal magnetic flux from a medium, wherein first and second magnetization free layers produce a magnetoresistance effect in accordance with the magnetization directions thereof;

a first electrode electrically connected with the underlayer and a second electrode electrically connected with the protective layer, the first and second electrodes allowing a current to flow in a direction substantially perpendicular to the plane of the magnetoresistive film; and

a first magnetic shield arranged on an opposite side of said first electrode from said underlayer and a second magnetic shield arranged on an opposite side of said second electrode from said protective layer.

Claim 2 (Canceled).

Claim 3 (Previously Presented): The magnetoresistive head according to claim 1, wherein each of the magnetic shields is in contact with the first electrode or with the second electrode.

Claim 4 (Original): The magnetoresistive head according to claim 1, wherein the intermediate layer is formed of a conductive nonmagnetic layer.

Claim 5 (Original): The magnetoresistive head according to claim 4, wherein the intermediate layer is formed of at least one kind of metal selected from the group consisting of Be, Al, Mg, Ca, Cu, Au, Ag, Rh, Ru and Ir.

Claims 6-12 (Canceled).

Claim 13 (Previously Presented): The magnetoresistive head according to claim 1, further comprising a pair of hard biasing films, one of said hard biasing films arranged on each end of the magnetoresistive film in a track width direction, said hard biasing films imparting magnetic biases to the first and second magnetization free layers in substantially the same direction.

Claims 14-17 (Canceled).

Claim 18 (Original): A perpendicular magnetic recording-reproducing apparatus, comprising:

a perpendicular magnetic recording medium; and

a magnetoresistive head according to claim 1 arranged to face the perpendicular magnetic recording medium.

Claim 19 (Previously Presented): A magnetoresistive head, comprising:

a magnetoresistive film including first and second magnetization free layers, an intermediate layer sandwiched between the first and second magnetization free layers, which are stacked in the order of the first magnetization free layer, the intermediate layer and the second magnetization free layer and arranged to be substantially perpendicular to an air-bearing surface, each first and second magnetization free layer having a magnetization direction which is allowed to vary independently in response to a signal magnetic flux from a medium, wherein the first and second magnetization free layers produce a magnetoresistance effect in accordance with the magnetization directions thereof;

a first electrode electrically connected with the first magnetization free layer and a second electrode electrically connected with the second magnetization free layer, the first and second electrodes allowing a current to flow in a direction substantially perpendicular to the plane of the magnetoresistive film; and

a first magnetic shield arranged on an opposite side of said first electrode from said first magnetization free layer; and

a second magnetic shield arranged on an opposite side of said second electrode from said second magnetization free layer.

Claim 20 (Canceled).

Claim 21 (Previously Presented): The magnetoresistive head according to claim 19, wherein each of the magnetic shields is in contact with the first electrode or with the second electrode.

Claim 22 (Previously Presented): The magnetoresistive head according to claim 19, wherein the intermediate layer is formed of a conductive nonmagnetic layer.

Claim 23 (Previously Presented): The magnetoresistive head according to claim 22, wherein the intermediate layer is formed of at least one kind of metal selected from the group consisting of Be, Al, Mg, Ca, Cu, Au, Ag, Rh, Ru and Ir.

Claim 24 (Previously Presented): The magnetoresistive head according to claim 19, further comprising a pair of hard biasing films, one of said hard biasing films arranged on each end of the magnetoresistive film in a track width direction, said hard biasing films imparting magnetic biases to the first and second magnetization free layers in substantially the same direction.

Claim 25 (Previously Presented): A perpendicular magnetic recording-reproducing apparatus, comprising:

a perpendicular magnetic recording medium; and

a magnetoresistive head according to claim 19 arranged to face the perpendicular magnetic recording medium.